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The Workshop

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ON CHANDELIERS.

With Illustrations.

By Mr. C. UHDE.

The Chandelier is unquestionably one of the most interesting pieces of furniture, both in the useful and ornamental point of view, which attract the eyes of the spectator as he enters an apartment. By day it is distinguished from every other object by its position as suspended from the ceiling; by night, as the centre of light, it immediately arrests attention.

In designing the form of the Chandelier, there are three modes of execution which are peculiarly adapted to give it the character of a pendent; for a striking contrast should be emphatically presented between the rest of the furniture, which stands on the floor, and this, the sole object hanging from the ceiling. The first method is to give it the appearance suggested by a drop falling from above, commencing with a thin thread, gradually increasing into a globe at the lower end. To this parent stem, the branches which hold the lights should attach themselves like tendrils, and surround the globular drop, which as a reflector of the light will receive an especial charm.

These tendrils cling in the most pleasing manner to the drooping thread or stem, either, as in fig. 1 in a single, or as in fig. 2 in a double curve. The connection of the tendrils as the light-holders with the larger volume of the central globe itself, as in figs. 3 and 4, does not produce so good an effect, inasmuch as in the two latter shapes the pendent character is not so distinctly expressed as in the former ones. On the contrary, in this case the structural necessity of fastening the tendrils to the globular drop must be brought into clear expres-

sion of form either by clasps of some sort at the points of contact, or a band round the globe in order to give a sufficient indication of the different directions of the main lines.

The second appearance which may be given to the Chandelier is that of a suspended vase. In this case also, shapes should be chosen adapted more for suspension than for standing upright, flat bowls with pointed knobs at the lower ends (figs. 5 and 6) rather than high vases with broad bases (fig. 7). The bowl is either suspended at the borders by chains, strings or tendrils which unite in a clasp under the ceiling (fig. 5) or by a richly decorated rod springing from the interior of the vessel (fig. 6). * The shape of fig. 7 is perfectly incongruous, as the upright vase standing on its base is entirely opposed to the character of suspension, and produces a disagreeable discord in the configuration of the lines. The structural disorder of the tendrils also, and their want of repose and arrangement, disturb the impression of suspension; and although it cannot be denied that there is something attractive in the pyramidal form of this chandelier which might appear correct to many an inexperienced eye, it is only cited here as an example to be avoided.

The third motive is that of a ring or hoop suspended by chains, (figs. 8 and 9) on or through which the light-holders appear to be placed; or hanging ten-

* Executed by S. Elster in Berlin for a circular dining hall in the ducal castle at Brunswick. Size 6 feet in diameter.

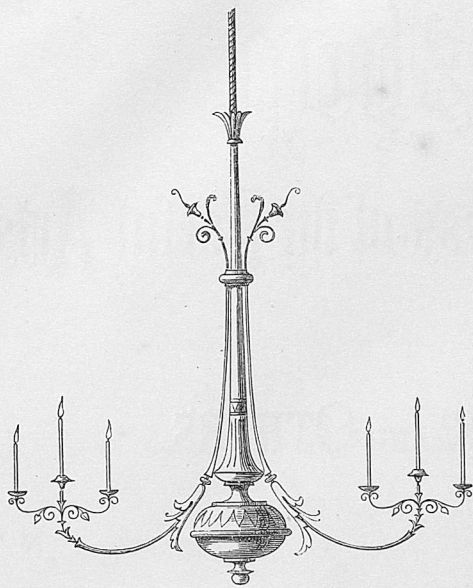


Fig. 1.

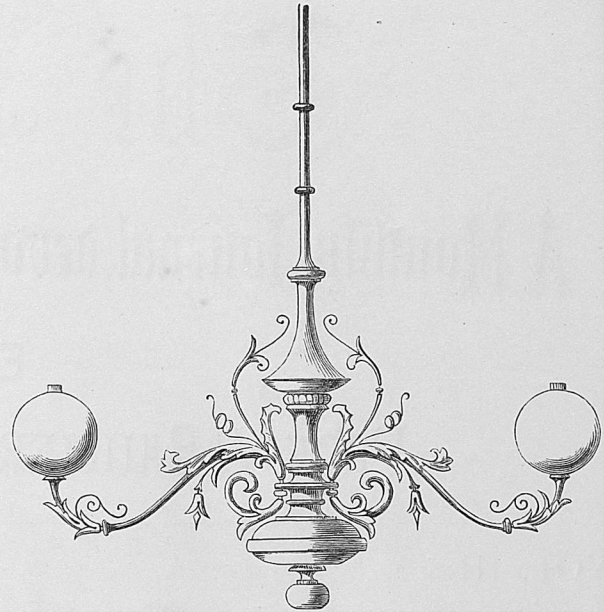
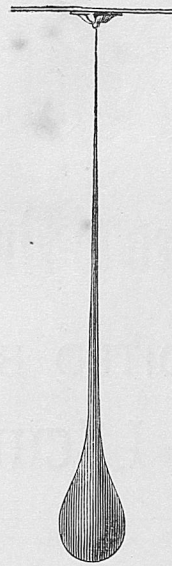


Fig. 2.

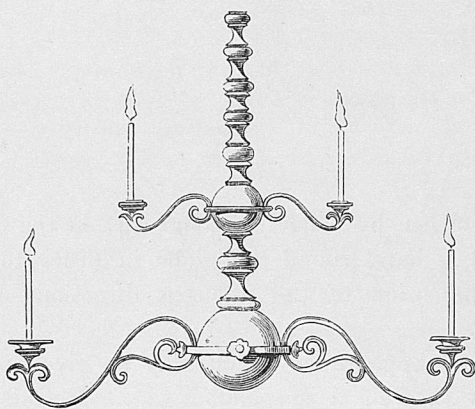


Fig. 3.

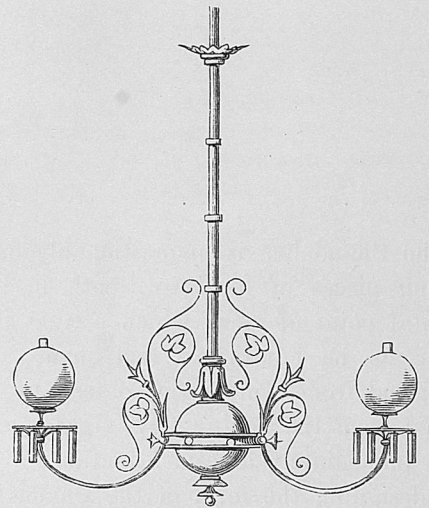
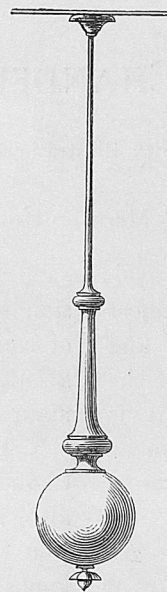


Fig. 4.

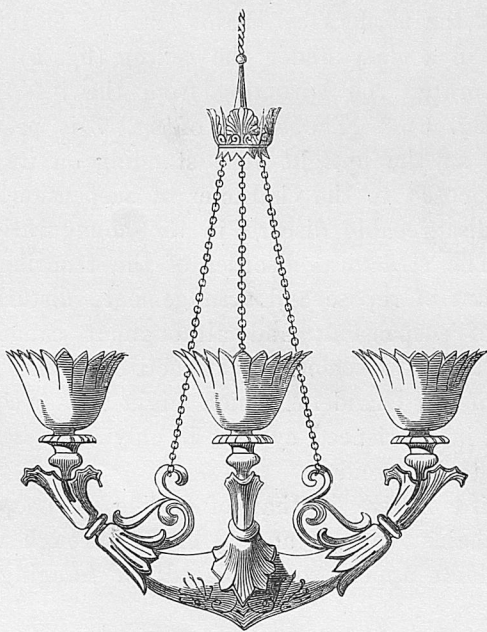


Fig. 5.

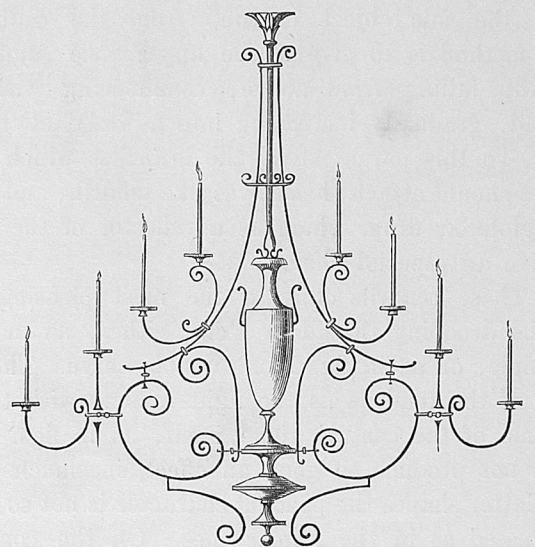
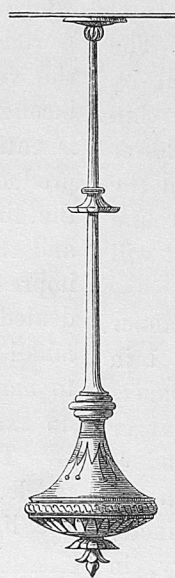


Fig. 7.

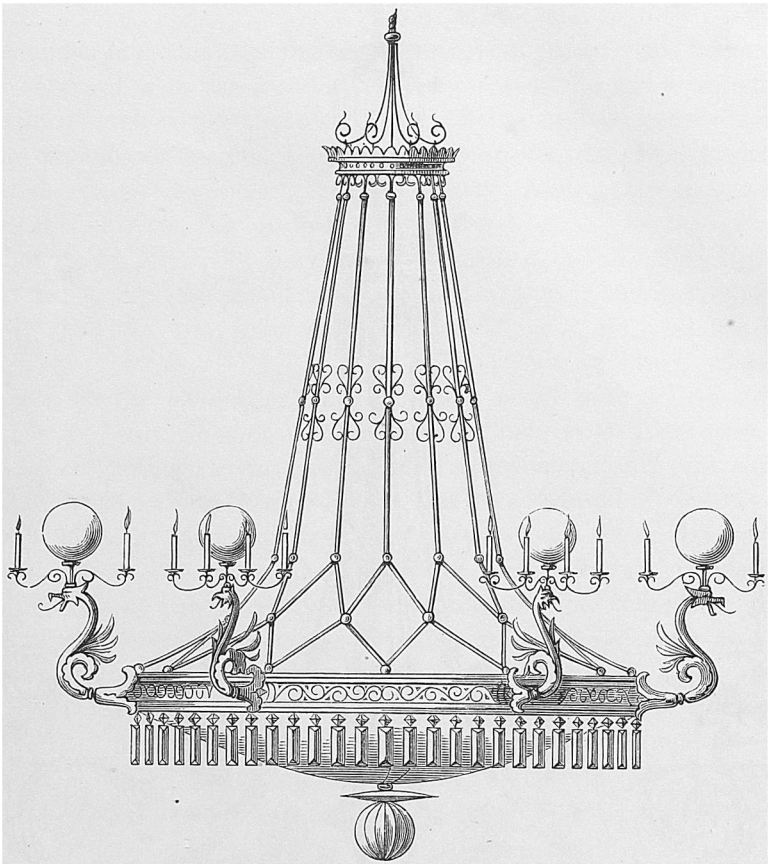


Fig. 8.

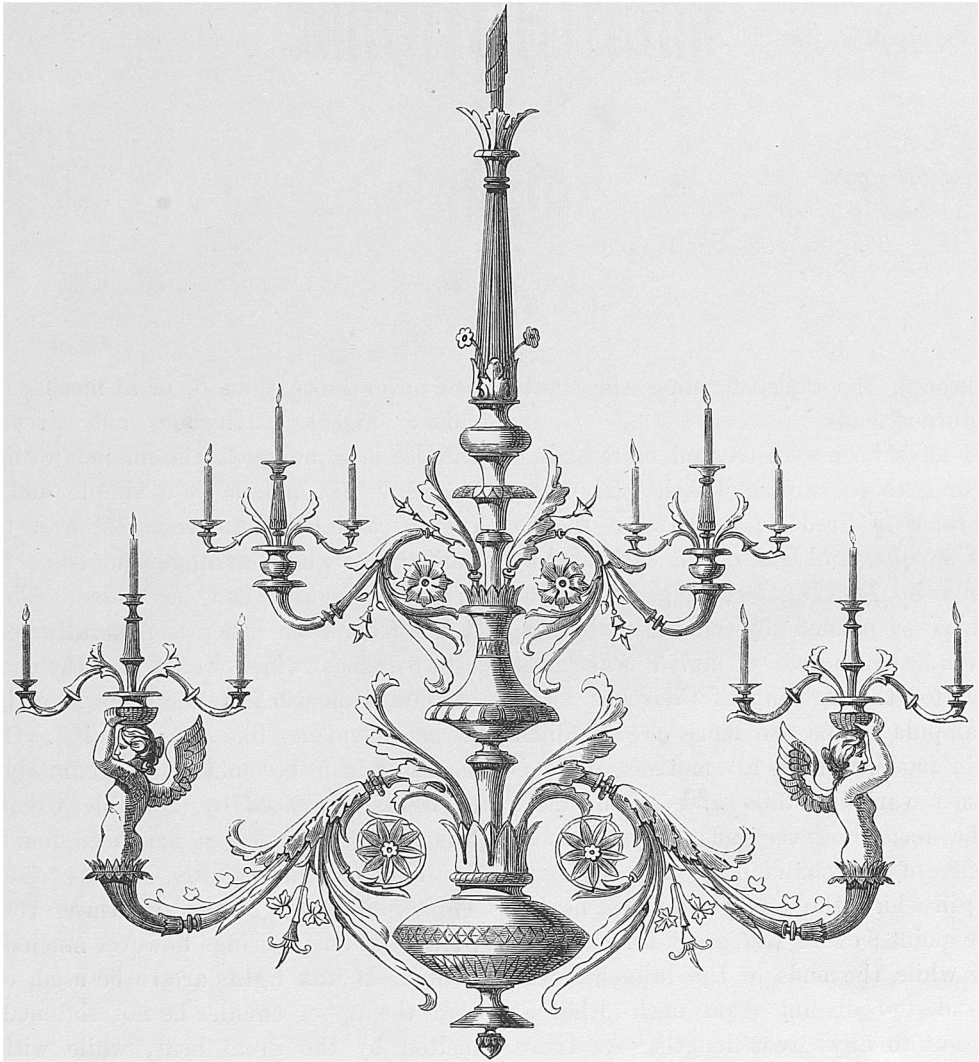


Fig. 6.

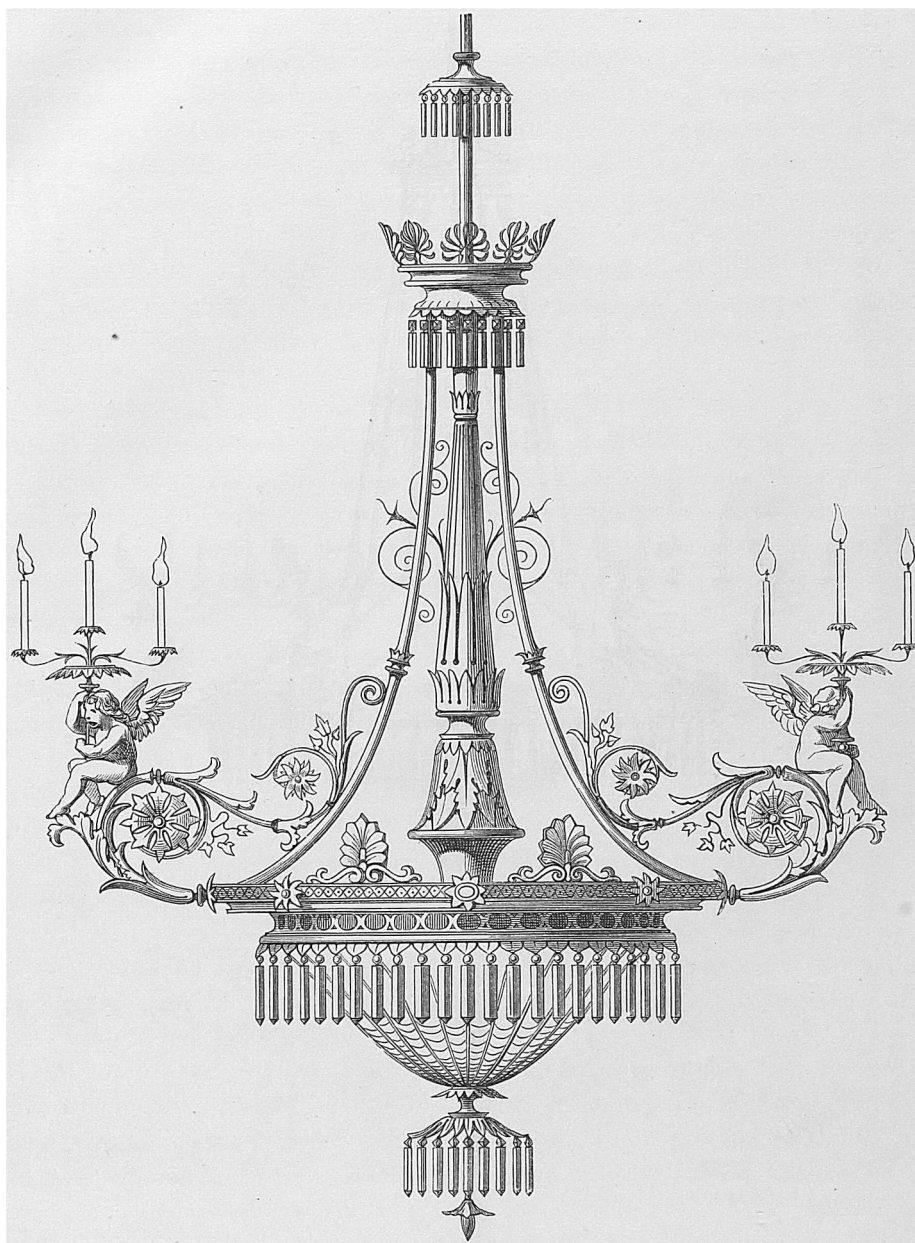


Fig. 9.

drills are twisted through the ring, forming the light-holders by their upturned ends.

All these styles have been with treated more or less of predilection according to the time and style. Thus the two Romanesque coronæ of Frederic Barbarossa in the cathedral of Aix-la-Chapelle, and that of the cathedral at Hildesheim (published in *The Builder*, Aug. 28. 1869) consist of large rings suspended by chains, whereas, after the Reformation, the motive of fig. 3 was most extensively employed for the lighting of Churches. The Greek and Roman ampula lamps are more closely allied to fig. 5, whereas in modern times all motives are employed with the most varied details and in the most different styles. The form however must depend most essentially on the size of the chandelier. The arrangements (figs. 1 and 7) in which the tendrils proceed nearly altogether from one point, cause too great an accumulation in one place, while the ends of the branches will be too divergent and too distant from each other if they are to stretch out to any great length. As there

are never more than 6, or at most 8 branches from one centre, and as each does not carry more than seven candles in a bouquet, the number of lights cannot exceed $8 \times 7 = 56$, unless by a simple and smaller repetition (figs. 5 and 6) of a second set over the lower circle of flames, by which arrangement some $8 \times 3 = 24$ more, in all 80 lights, can be added. The distance of the lights from each other is generally reckoned to be about 6 to 8 inches, which would give the chandelier a diameter of 5 or at most 6 feet, and this should never be exceeded in arrangements like figs. 1 and 7. On the other hand, the ring can be enlarged indefinitely and the number of lights increased by a double wreath of flame. For this reason this design has been found the best adapted for lighting large halls, lecture rooms and theatres. This application of two or three rows of lights in a pyramidal shape brings however much difficulty in the execution. If wax lights are to be used, care must be taken that the upper candles be not softened, or perhaps even melted by the great heat, while with gas, the upper

parts of the chandelier will suffer from the lower lights and the bronze will be injured.

In order to calculate the dimension of a chandelier for a given space it is to be observed that one fifth or one sixth of its breadth should be taken for the diameter, whence, considering the distance of the jets, their number may easily be computed. In sitting rooms, the lowest point should be about 8 feet from the ground, while in lofty rooms, dancing halls etc., the height should be divided into 3 equal parts, and the chandelier hung in that which is midway between the floor and the ceiling.

The distribution of the jets in the chandelier can be arranged in two ways, either by fixing them at equal distances or in groups. The latter method is certainly the better adapted to the whole construction, setting it off more advantageously than the former, which, though frequently adapted by French manufacturers, renders the form confused and indistinct. Such groups are frequently marked by a globe of ground glass in the centre, relieving the surrounding wreath of light. For many years open gas flames have been entirely discarded, all being hidden under globes of glass. Though it cannot be denied that the brilliancy of the open light, which is often injurious to the eye, is avoided by this method, still nearly double the number of jets is necessary to produce the same amount of light in the room, thus increasing the expense and making the heat intolerable unless the ventilation is especially good. The repose of this calm colourless light has something beneficent about it in comparison with that of the open flame, and may be compared to an overcast day following a bright cloudless sunshine. We doubt however the propriety of this method of lighting. Were we to banish all direct light from our rooms, and aim at producing only such clearness as is necessary for the light, the interest of novelty would be lost, and we should sigh, as on a cloudy day for the reappearance of the sun. So the experiments for doing away with chandeliers in theatres where they are really a hindrance to the spectators, as in the Theatre du Chatelet at Paris, where the light comes from a transparent tentlike glass ceiling, have scarcely met with any imitators. On the contrary the method of lighting at the South Kensington Museum by rows of open gas flames, corresponding with the ground plan of each room, has been most effectual and successful.

The materials commonly used for chandeliers are brass and crystal, substances which either reflect the rays of light, and thus seem to multiply them, or which, by breaking them, produce a magic charm of colour otherwise unattainable. Those of iron work, with polychromic painting, as British manufacturers now frequently make them, are a contradiction to the entire intention of the chandelier, absorbing the light instead of spreading or reflecting it. The forms of the chandelier itself, especially when lighted, will not strike the eye, and the brilliant lights appear to be without any structural and organic connection with one another. But as we

have already remarked when speaking of the arrangement of the jets, that they ought to be placed in certain symmetrical groups, this becomes more important in the distribution of the masses of shining metal or glass which compose the nucleus and branches of the chandelier.

Above all, the arrangement of the main lines should be clearly visible, the large masses forming the centre, being here set off to the greatest advantage, as they are furnished on all sides by the circle of light, and reflect the rays. It is therefore advisable to keep the innermost parts the most shining, to polish the metal in gold, bronze or brass, while the lighter tendrils and branches would have a better effect in dead finish. Too heavy or too projecting forms close to or beneath the jets are to be avoided, not only because the transition to the unsubstantial flames should be easy and elegant, but also because great opaque bodies cast a shadow and thus encroach on the full effect of light. The Spectator who regards the chandelier from below will only too easily observe those parts of it which are in shade, so that particularly with large chandeliers they should be themselves lighted by a certain number of jets applied in the inside or to the under part, by which means the shadow is neutralised. In fig. 9 there is behind the lower large ring of glass-prisms, a wreath of small open flames which heighten the effect and brilliancy, the polychromatic play of the crystal making it appear to the greatest advantage.

In general, the body and branches of the chandelier should be made of bronze, a material durable in reality and of equally solid appearance, but in the last century, glass and porcelain have found place in its construction.

The old Meissen chandeliers with their variegated exterior, their fragile, unconstructive forms are distinguished by a characteristic want of taste, as are also the sacklike chandeliers of glass held together by strings of crystal.

Only very recently have English and French artists succeeded in making crystal a worthy material for the construction of chandeliers, the glass serving as a decoration for the bronze. Much as it should be avoided to use glass alone, on account of its extreme brittleness, in the construction of a framework which has to support any weight, it produces a very favorable effect in combination with the polished lustre of the metal and by its refraction of light. Most effective also are glass prisms between the light and the spectator, the yellow light being broken up and divided into the varied colors of the rainbow, and shedding over a colourless space a tint of bright light.

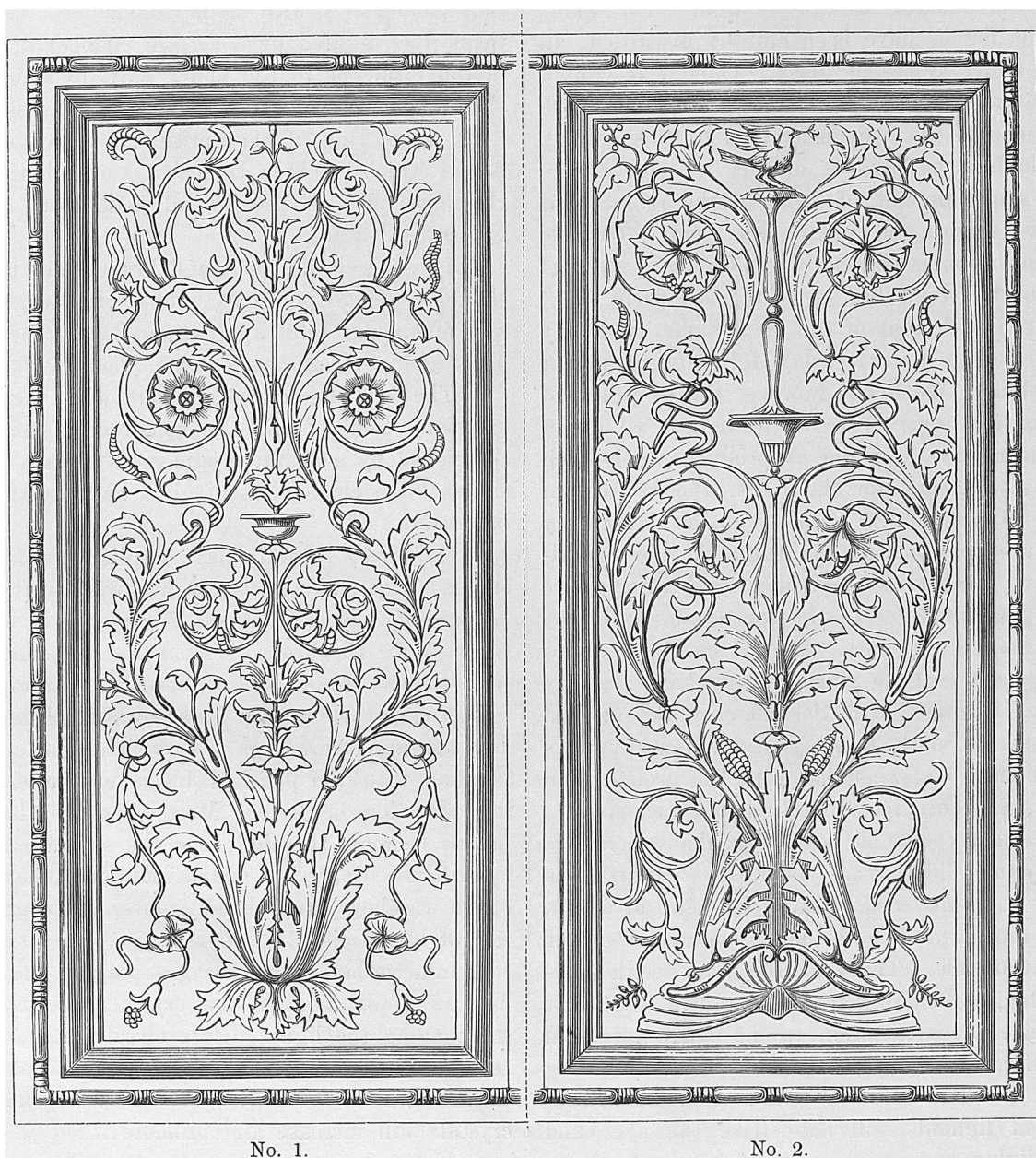
In accordance with the grouping of the jets, should be the application of the crystal, accompanying and surrounding the light. Glass tassels hung, without any regular design, over a chandelier will be as detrimental to the general effect as the judicious distribution of crystals will increase and promote it.

Although for many centuries no other means were known for artistically lighting a room but by coronæ or

chandeliers, yet in our age of experimentalising, repeated attempts have been made to banish this elegant ornament and to replace it by single points of light; for the so called sun-burners and electric lights can only be considered as such. The object may be obtained, but the means, the shape through which the light is shed are altogether disregarded. Wherever this has been

attempted, a difficulty has always had to be encountered, namely the meeting the extreme heat thus produced by more perfect ventilation. But by adhering merely to the utilitarian principle, that one piece of furniture has fallen into disuse, which alone was adapted to interrupt the empty space between the walls, the floor and the ceiling.

SPECIMENS OF ORNAMENTATION.



Nos. 1 and 2. Italian. — Panel Ornaments in red marble, decorating Pilasters at Head of *Scala de' Giganti*; Doge's Palace, Venice.